In the Claims:

Please amend the claims as follows:

1. (currently amended) A method for non-contact measurement of a dimension and/or an electrical property of an electrically conductive object to be measured, the method comprising: ~~by using electromagnetic induction, and in which method an electromagnetic field is brought to penetrate through the object to be measured, characterized by~~

placing a transmitter coil ~~(3)~~ on one side of the object ~~(5)~~ to be measured,

placing a receiver coil ~~(7)~~ on the other, opposite, side of the object ~~(5)~~ to be measured,

generating a magnetic field in the transmitter coil ~~(3)~~,

suddenly changing the magnetic field generated in the transmitter coil ~~(3) suddenly changing~~,

detecting the voltage ~~(S1)~~ induced in the receiver coil ~~(7)~~,

determining the period of time ~~(Ta)~~ that elapses from the time of the change of the magnetic field in the transmitter coil ~~(3)~~ up to the time ~~(t1)~~ when a voltage starts being induced in the receiver coil ~~(7)~~,

determining the maximum magnitude ~~(S1max)~~ of the voltage induced in the receiver coil ~~(7)~~, and

based on measured values received, calculating the thickness and/or electrical conductivity of the object ~~(5)~~ to be measured.

2. (currently amended) ~~A~~ The method according to claim 1, ~~characterized in that~~

wherein the thickness or electrical conductivity of the object ~~(5)~~ to be measured is calculated on the basis of the period of time ~~(Ta)~~ and the maximum voltage ~~(S1max)~~ induced in the receiver coil ~~(7)~~.

3. (currently amended) ~~A~~ The method according to claim ~~1 or 2, characterized in that~~ 1, wherein the thickness or electrical conductivity of the object ~~(5)~~ to be measured is calculated on the basis of the product of the period of time ~~(Ta)~~ and the maximum voltage ~~(S1max)~~ induced in the receiver coil ~~(7)~~.

4. (currently amended) ~~A~~ The method according to ~~one or more of the preceding claims, characterized in that~~ claim 1, wherein the thickness or electrical conductivity of the object ~~(5)~~ to be measured is calculated on the basis of the reciprocal value of the product of the square of the maximum voltage ~~(S1max)~~ induced in the receiver coil ~~(7)~~ and the period of time ~~(Ta)~~.

5. (currently amended) ~~A~~ The method according to ~~one or more of the preceding claims, characterized in that~~ claim 1, wherein the voltage ~~(S1)~~ induced in the receiver coil ~~(7)~~ is integrated and ~~that~~ wherein the thickness or electrical conductivity of the object ~~(5)~~ to be measured is calculated on the basis of the value of this integrated signal ~~(S2)~~.

6. (currently amended) ~~A~~ The method according to ~~one or more of the preceding claims, characterized in that~~ claim 1, wherein the voltage ~~(S1)~~ induced in the receiver coil ~~(7)~~ is integrated and ~~that~~ wherein the thickness or electrical conductivity of the object ~~(5)~~ to be measured is calculated on the basis of the value of this integrated signal ~~(S2)~~ at at least two

different points in time ~~(t2, t3)~~.

7. (currently amended) ~~A~~ The method according to claim 6, ~~characterized in that~~ wherein the two different points in time ~~(t2, t3)~~ are determined in advance.

8. (currently amended) ~~A~~ The method according to claim ~~6 or 7, characterized in that~~ 6, wherein the two different points in time ~~(t2, t3)~~ are located within the time interval ~~(Tb)~~, that is, between the time ~~(t0)~~ for a sudden change of the magnetic field in the transmitter coil ~~(3)~~ and the time ~~(t4)~~ when the voltage ~~(S1)~~ induced in the receiver coil (7) has safely dropped below its maximum value ~~(S1max)~~.

9. (currently amended) ~~A~~ The method according to ~~any of claims 6-8, characterized in that~~ claim 6, wherein the two different points in time ~~(t2, t3)~~ are located within the time interval ~~(Tb)~~ but after the period of time ~~(Ta)~~.

10. (currently amended) A measuring device for non-contact determination of one or more sought properties of an object ~~(5)~~ to be measured, ~~such as its geometrical dimension and/or electrical conductivity,~~ the measuring device comprising:

at least one transmitter coil ~~(3)~~ and at least one receiver coil ~~(7)~~ located in spaced relationship to each other, ~~as well as~~ wherein the transmitter coil is arranged to generate a changeable magnetic field, and the receiver coil is arranged to generate a voltage when being subjected to a change of magnetic field,

means for generating a changeable magnetic field in the transmitter coil ~~(3)~~ and means

for detecting a voltage ~~(S1)~~ induced in the receiver coil ~~(7)~~, ~~characterized in that~~

~~the transmitter coil (3) is arranged to generate a changeable magnetic field,~~

~~the receiver coil (7) is arranged to generate a voltage (S1) when being subjected to a change of magnetic field,~~

a control circuit ~~(1) is~~ arranged to initiate a sudden change of the magnetic field in the transmitter coil ~~(3)~~,

means ~~(10, 11, 12,13) are~~ arranged to determine the time ~~(t1)~~ for the penetration of the magnetic field through the object ~~(5)~~ to be measured and hence the time period ~~(Ta)~~,

means ~~(13) are~~ arranged to detect the maximum induced voltage ~~(S1max)~~ in the receiver coil ~~(7)~~, and that

means ~~(13) are~~ arranged to calculate, based on these values, the thickness or electrical conductivity of the object ~~(5)~~ to be measured.

11. (currently amended) ~~A~~ The measuring device according to claim 10, ~~characterized in that~~ further comprising:

an integrator ~~(10) is~~ arranged to integrate the voltage signal ~~(S1)~~ induced in the receiver coil ~~(7)~~.

12. (currently amended) ~~A~~ The measuring device according to claim ~~10 or 11, characterized in that~~ 10, further comprising:

circuits ~~(10-12) are~~ arranged to measure the voltage ~~(S1)~~ induced in the receiver coil ~~(7)~~ at two different times ~~(t2, t3)~~ after the time ~~(0)~~ for interruption in the transmitter coil ~~(3)~~.

13. (currently amended) ~~A~~ The measuring device according to ~~one or more of claims 10 to 12, characterized in that~~ claim 10, further comprising:

circuits ~~(10-12) are~~ arranged to detect the period of time ~~(Ta)~~ that elapses from the time ~~(t0)~~ for the change of the magnetic field in the transmitter coil ~~(3)~~ up to the time ~~(t1)~~ when a voltage starts being induced in the receiver coil ~~(7)~~.

14. (currently amended) A computer program product, comprising:

a computer readable medium; and

computer code recorded on the computer readable medium and executable by a processor for carrying out the ~~method~~ steps ~~according to any of claims 1-9~~ of

placing a transmitter coil on one side of the object to be measured,

placing a receiver coil on the other, opposite, side of the object to be measured,

generating a magnetic field in the transmitter coil,

suddenly changing the magnetic field generated in the transmitter coil,

detecting the voltage induced in the receiver coil,

determining the period of time that elapses from the time of the change of the magnetic field in the transmitter coil up to the time when a voltage starts being induced in the receiver coil,

determining the maximum magnitude of the voltage induced in the receiver coil, and

based on measured values received, calculating the thickness and/or electrical conductivity of the object to be measured.

15. (cancelled)

16. (currently amended) ~~A~~ The computer program product according to claim 14, wherein the computer code is further for carrying out the step of ~~which is~~ at least partly ~~transmitted~~ transmitting the computer code via a network ~~such as, for example, the Internet~~.

17. (currently amended) Use of a device according to ~~claims 10-13~~ claim 10.

18. (new) The computer program product according to claim 16, wherein the network is the internet.